CLAIMS

1. A tetrafluoroethylene polymer aqueous dispersion obtained by carrying out a tetrafluoroethylene polymerization in an aqueous medium in the presence of a fluorovinyl group-containing emulsifier,
wherein said tetrafluoroethylene polymer aqueous dispersion contains a particle comprising a tetrafluoroethylene polymer dispersed in said aqueous medium,
said fluorovinyl group-containing emulsifier comprises a fluorovinyl group-containing compound (I) represented by the general formula (I):

$$CF_2=CF-(CF_2)_a-Y \qquad (I)$$

wherein a represents an integer of 1 to 10 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal,
a fluorovinyl group-containing compound (II) represented by the general formula (II):

$$CF_2=CF-(CF_2C(CF_3)F)_b-Y \qquad (II)$$

wherein b represents an integer of 1 to 5 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal,
a fluorovinyl group-containing compound (III) represented by the general formula (III):

$$CF_2=CFO-(CFX)_c-Y \qquad (III)$$

wherein X represents F or $-CF_3$, c represents an integer of 1 to 10 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal,
a fluorovinyl group-containing compound (IV) represented by the general formula (IV):

$$CF_2=CFO-(CF_2CFXO)_d-(CF_2)_e-Y \qquad (IV)$$

wherein X represents F or $-CF_3$, d represents an integer of 1 to 10, e represents an integer of 1 to

3 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal,
a fluorovinyl group-containing compound (V) represented by the general formula (V):

$$CH_2=CFCF_2O-(CF(CF_3)CF_2O)_f-CF(CF_3)-Y \quad (V)$$

wherein f represents an integer of 0 to 10 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal, and/or
a fluorovinyl group-containing compound (VI) represented by the general formula (VI):

$$CF_2=CFCF_2O-(CF(CF_3)CF_2O)_g-CF(CF_3)-Y \quad (VI)$$

wherein g represents an integer of 1 to 10 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal,
said tetrafluoroethylene polymer aqueous dispersion has a fluorine-containing surfactant content of not higher than 1000 ppm by mass.

2. The tetrafluoroethylene polymer aqueous dispersion according to Claim 1, wherein the tetrafluoroethylene polymer has a tetrafluoroethylene unit content exceeding 40 mole percent.

3. The tetrafluoroethylene polymer aqueous dispersion according to Claim 1 or 2, wherein the tetrafluoroethylene polymer is a perfluoro-based polymer.

4. The tetrafluoroethylene polymer aqueous dispersion according to Claim 1, 2 or 3, wherein the tetrafluoroethylene polymerization is carried out in the absence of any non-byproduct fluorine-containing surfactant.

5. The tetrafluoroethylene polymer aqueous dispersion according to Claim 1, 2, 3 or 4, wherein the fluorovinyl group-containing emulsifier comprises the fluorovinyl group-containing compound (I), the fluorovinyl group-containing compound (III), the fluorovinyl group-containing compound (IV) and/or the fluorovinyl group-containing compound (V).

6. The tetrafluoroethylene polymer aqueous dispersion according to Claim 5, wherein the fluorovinyl group-containing emulsifier comprises a fluorovinyl group-containing compound (i) represented by the general formula (i):

$CF_2=CF-(O)_h-(CF_2CF(CF_3)O)_i-(CF_2)_j-Y$ (i)

wherein h represents an integer of 0 or 1, i represents an integer of 0 to 2, j represents an integer of 1 to 3 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal, and/or a fluorovinyl group-containing compound (ii) represented by the general formula (ii):

$CH_2=CFCF_2O-(CF(CF_3)CF_2O)_k-CF(CF_3)-Y$ (ii)

wherein k represents an integer of 0 to 3 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal.

7. The tetrafluoroethylene polymer aqueous dispersion according to Claim 1, 2, 3, 4, 5 or 6, which has a solid matter concentration of 5 to 70% by mass.

8. The tetrafluoroethylene polymer aqueous dispersion according to Claim 1, 2, 3, 4, 5, 6 or 7, wherein the particle comprising the tetrafluoroethylene polymer has an average primary

particle diameter of 50 to 500 nm.

9. A tetrafluoroethylene polymer powder which is obtained by coagulating the tetrafluoroethylene polymer aqueous dispersion according to Claim 1, 2, 3, 4, 5, 6, 7 or 8.

10. A tetrafluoroethylene polymer molding which is obtained by molding/processing using the tetrafluoroethylene polymer aqueous dispersion according to Claim 1, 2, 3, 4, 5, 6, 7 or 8 or the tetrafluoroethylene polymer powder according to Claim 9.

11. A method of producing a tetrafluoroethylene polymer aqueous dispersion by carrying out a tetrafluoroethylene polymerization in an aqueous medium in the presence of a fluorovinyl group-containing emulsifier,
wherein said tetrafluoroethylene polymer aqueous dispersion contains a particle comprising a tetrafluoroethylene polymer dispersed in said aqueous medium and has a fluorine-containing surfactant content of not higher than 1000 ppm by mass,
said fluorovinyl group-containing emulsifier is added in an amount of 0.00001 to 2% by mass relative to said aqueous medium, and
said fluorovinyl group-containing emulsifier comprises a fluorovinyl group-containing compound (I) represented by the general formula (I):

$$CF_2=CF-(CF_2)_a-Y \qquad (I)$$

wherein a represents an integer of 1 to 10 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal,

a fluorovinyl group-containing compound (II) represented by the general formula (II):

$CF_2=CF-(CF_2C(CF_3)F)_b-Y$ (II)

wherein b represents an integer of 1 to 5 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal,

a fluorovinyl group-containing compound (III) represented by the general formula (III):

$CF_2=CFO-(CFX)_c-Y$ (III)

wherein X represents F or $-CF_3$, c represents an integer of 1 to 10 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal,

a fluorovinyl group-containing compound (IV) represented by the general formula (IV):

$CF_2=CFO-(CF_2CFXO)_d-(CF_2)_e-Y$ (IV)

wherein X represents F or $-CF_3$, d represents an integer of 1 to 10, e represents an integer of 1 to 3 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal,

a fluorovinyl group-containing compound (V) represented by the general formula (V):

$CH_2=CFCF_2O-(CF(CF_3)CF_2O)_f-CF(CF_3)-Y$ (V)

wherein f represents an integer of 0 to 10 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal, and/or

a fluorovinyl group-containing compound (VI) represented by the general formula (VI):

$CF_2=CFCF_2O-(CF(CF_3)CF_2O)_g-CF(CF_3)-Y$ (VI)

wherein g represents an integer of 1 to 10 and Y represents $-SO_3M$ or $-COOM$ in which M represents H, NH_4 or an alkali metal.

12. The method of producing a tetrafluoroethylene polymer aqueous dispersion according to Claim 11, wherein the addition of the fluorovinyl group-

containing emulsifier is carried out in the manner of a supplementary addition with the progress of a tetrafluoroethylene polymerization reaction.